



Klamath Network Featured Creature

May 2005

Clustered Lady's Slipper (*Cypripedium fasciculatum*)

FIELD NOTES:

General Description:

Cypripedium fasciculatum can be distinguished by its single pair of broad parallel-veined leaves, wooly stem, and drooping cluster of 1-8+ flowers. Clustered flowers often occur on clustered stems of spatially clustered plants. The flowers are generally greenish-brown or greenish-purple and purple-lined or mottled with a large greenish-yellow pouch. Glandular hairs on stems and peduncles excrete a sticky red substance which becomes increasingly concentrated on peduncles and ovaries with seed development. Peduncle elongation is related to number of flowers pollinated.

Evolutionary Relationships:

One of 2 orchid sub-families with fertile lateral anthers that diverged early in the history of orchid evolution.

Ecology:

C. fasciculatum grows from a short non-branching rhizome that very slowly elongates anteriorly and is re-absorbed posteriorly. Rarely, adventitious root buds may occur. Self-compatible but generally outcrossing, the species has complex relationships with fungi, pollinators, and fire that are not fully understood. A stem may not appear above ground for several years. During this time, nutrition may be sustained by its relationship with mycorrhizal symbionts. *C. fasciculatum* is pollinated by a Diapriid parasitoid wasp that lays its eggs in fungus gnat larvae. Preliminary studies in the Klamath region indicate that most seedlings occur in old-growth forests.



Close up of *Cypripedium fasciculatum* flowers (above) and a full plant (below) with drooping flowers and broad leaves.



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Status:

The category of greatest endangerment in each of 3 western states is: CNPS list 4 (CA), State Candidate for Listing (OR), Sensitive (WA). Most comments indicate more information is needed for this species.

Habitat:

C. fasciculatum can be found in a wide range of habitat types in various soils, elevations, and plant communities that vary with latitude and forest structure. There are apparent commonalities in resulting microclimates among these diverse habitats. Populations often consist of 10 or fewer individuals with occasional larger populations of a few hundred plants. They are generally found in areas with greater than 50% canopy cover with a northerly aspect although they may persist in areas with larger overstory openings. Monitored populations in the Klamath region generally occurred in forests with 80 to 90% canopy cover.

Distribution:

C. fasciculatum is found in scattered, disjunct populations from northeastern WA to central CA, ID, MT, CO, WY, and UT. The Klamath Region is a major center of population distribution.

Where to see it in the

Klamath Parks:

Shasta Bally in Whiskeytown NRA. It is highly likely to occur at or near Oregon Caves NM and may potentially occur along the eastern edges of Redwood NSP and at lower elevations at Lassen Volcanic NP.